The Radioddity GD-77 and the OpenGD77 Firmware Project

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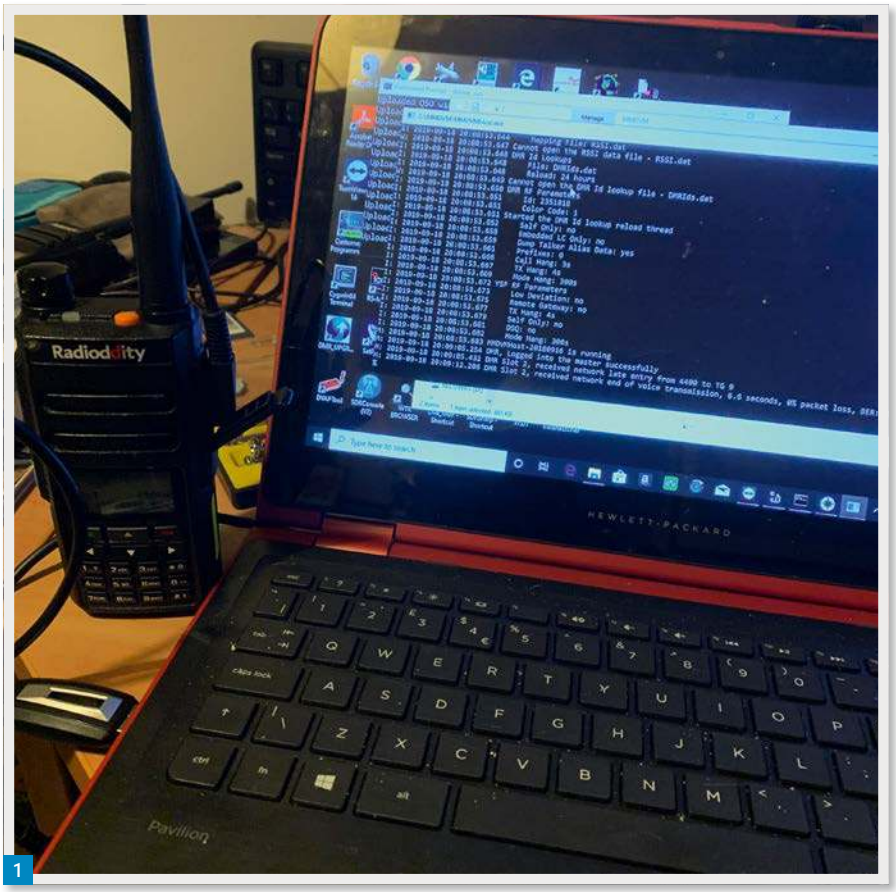
Tim Kirby has a full column this month, starting with some interesting developments relating to the GD-77.



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Readers who have been with us for a little while may remember that I reviewed the Radioddity GD-77 dual-band DMR handheld here in *PW* some months ago. I have one myself and it's good value for money – dual-band DMR for around £70-80. A little quirky perhaps, but once you get used to it, it works just fine and it's been a faithful companion on many country walks.

Open GD77

I was interested recently, therefore, to learn of the OpenGD77 project. The aim of this is to rewrite the firmware for the GD-77, specifically for amateur use. **Roger Clark VK3KYY** is the main person behind the project although **Kai DG4KLU** and **Colin G4EML** have both made very important contributions.

Although the project is at a comparatively early stage, some very interesting and useful achievements have already been made. Currently the firmware only supports DMR Tier 1. This means that it cannot use two separate timeslots, so you should not update to the OpenGD77 firmware if you need to use the rig on a DMR repeater. However, if you want to use it with your own digital hotspot, then you can do that quite safely. I should say, at this stage, if you decide having installed the OpenGD77 firmware that you want to go back to the Radioddity 'official' firmware, then that's no problem and you can flash it straight back in.

DMR Tier 2 functionality is being worked on and by the time you read this, it may even be available. Early testing is already taking place.

However, what was particularly interesting to me was that the OpenGD77 firmware contains a 'hotspot mode'. With the GD-77 in hotspot mode and the USB lead used for programming connected to a computer running hotspot software, you have a 5W DMR hotspot (you also can reduce power should you so wish). Please bear in mind your licence conditions regarding running such a hotspot.

Software

What hotspot software can you use? My first test used an old Raspberry Pi 2 running the Pi-Star software. You'll need to use version 4.1 of Pi-Star and then, within Pi-Star run an upgrade to allow you to address the OpenGD77. The Raspberry Pi2 doesn't have WiFi, so I plugged it straight into the internet router with an RJ-45 for network connectivity. Once I'd done that, I was able to configure Pi-Star and was delighted to find that the hotspot worked beautifully, as I would have hoped.

There are also a couple of Windows options that you can use. Before you do, you will need to install the OpenGD77 driver for Windows, so that Windows will recognise your GD-77 with the OpenGD77 firmware running. Install that, and then plug your GD-77 with USB cable attached into a USB port and in Device Manager, under Ports, you should see a new Serial Port listed. It should be obvious which one it is but if not, unplug it and see what vanishes! Armed with that information you are all set to get the Hotspot running.

The simplest way is to use the BlueDV for Windows software from **David PA7LIM** (URL below). It's pretty self-explanatory if you are used to configuring DMR hotspots. You'll need to have the OpenGD77 driver loaded and the rig connected by USB – the appropriate serial port will then show up to be configured in the software.

www.pa7lim.nl/bluedv-windows

Riku OH1E has produced an excellent YouTube video that should help with the whole process:

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